receiving said authentication information from said signal conditioning circuitry in response to said request;

comparing said authentication information with initial information; and

signal an error in response to said authentication information not being equal to said initial information.

37. (Amended) The method of claim 34 further comprising the steps of:

storing a record of said authentication information in a memory in said host system.

38. (Amended) The method of claim 34 further comprising the steps of:

terminating operation of said system in response to said signal error.

42. (Amended) The method of claim 37 wherein said record includes a time stamp indicating when said authentication information is received.

Please add claim 44 as follows:

44. The Coriolis flowmeter of claim 37 wherein said record includes said authentication information received from said signal conditioner.

REMARKS

This Preliminary Amendment is submitted prior to examination of the above-referenced patent application. The above claims have been amended to reflect the inventive step of signaling an error once authentication has been checked and an invalid response has been returned. This is followed by saving such authentication information if so desired.

CONCLUSION

In light of the foregoing amendments and remarks, Applicant believes that pending claims 1-44 are in condition for allowance, and that action is respectfully requested. In accordance 37 CFR δ 1.121, attached hereto is a page entitled "Version with Markings to Show Changes Made" showing the specific changes

made to the claims by the current amendment. If there are any remaining matters that can be handled in a telephone conference, the Examiner is invited to telephone the undersigned attorney, Curtis J. Ollila, at (303) 546-1383.

Respectfully submitted,

Date: 1/9/02

Curtis J. Ollila, Reg. No. 47,833
Telephone: (303) 546-1383
Facsimile: (303) 449-5426

Correspondence Address:

Customer No: 28286

COPY OF PAPERS
ORIGINALLY FILED

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Specification

Please delete the paragraph beginning on page 3, line 31 and ending on page 4, line 7, and insert in its place:

A first aspect of this invention is a system for preventing tampering with signal conditioning circuitry in electronics that determines a parameter from signals received from sensors and transmits the parameter to a host system. The host system receives data from and send data to said signal conditioning circuitry and has a processing unit with a connected memory. Processing unit in the host system performs instructions stored in the memory that periodically transmit a request for authentication information to the signal conditioning circuitry, receive the authentication information the said signal conditioning circuitry, **compares the authentication information with initial information, and signals an error in response to the authentication information not being equal to said initial information** **[and store a record of the authentication information received from said signal conditioning circuitry in the memory]**.

Please delete the paragraph beginning on page 4, line 12 and ending on page 4, line 14, and insert in its place:

A fourth aspect of this invention is that the host system **stores a record of the authentication information received from said signal conditioning circuitry in the memory** **[compares the authentication information with initial information, and signals an error in response to the authentication information not being equal to said initial information]**.

In the Claims

Please amend claims 1, 4-6, 10-12, 15, 16, 21-23, 26-28, 32-34, 37, 38 and 42 as follows:

1. (Amended) A system for preventing tampering with signal conditioning circuitry in electronics that determines a parameter from signals received from sensors, said system comprising:

a host system that receives data from and sends data to said signal conditioning circuitry;

a processing unit in said host system;

a memory connected to said processing unit;

instructions for directing said processing unit in said host system to periodically transmit a request for authentication information from said signal conditioning circuitry, receive said authentication information from said signal conditioning circuitry in response to said request, **comparing said authentication information with initial information, and signal an error in response to said authentication information not being equal to said initial information** **[and store a record of said authentication information received from said signal conditioning circuitry in said memory]**; and

a media readable by said processing unit for storing said instructions.

4. (Amended) The system of claim 1 wherein said instructions for directing said processing unit in said host system includes:

instructions for directing said processing unit in said host system to **store a record of said authentication information received from said signal conditioning circuitry in said memory** **[compare said authentication information with initial information, and signal an error in response to said authentication information not being equal to said initial information]**.

5. (Amended) The system of claim 1 **[4]** wherein said instructions for directing said processing unit in said host system includes:

instructions for directing said processing unit in said host system to terminate operation of said system.

6. (Amended) The system of claim 1 **[4]** wherein said instructions include:

instructions for directing said processing unit to obtain said initial information.

10. (Amended) The system of claim **4** **[1]** wherein said record includes a time stamp indicating when said authentication information is received.

11. (Amended) The system of claim **4** **[1]** wherein said record includes said authentication information received from said signal conditioning circuitry.

12. (Amended) Meter electronics for a Coriolis flowmeter that detects possible tampering comprising:

a host system that receives parameter signals indicating properties of a material flowing through said Coriolis flowmeter from said signal conditioner and supplies power to signal conditioner;

a signal conditioner remote from said host system and communicatively connected to said host system wherein said signal conditioner receives pick-off signals from sensors affixed to said Coriolis flowmeter and generates said parameter signals from said pick-off signals;

a processing unit in said host system;

a memory connected to said processing unit in said host system;

instructions for directing said processing unit in said host system to:

periodically transmit a request for authentication information to said signal conditioner,

receive said authentication information from said signal conditioner in response to said request, **[and]**

compare said authentication information with initial information, and

signal an error in response to said authentication information not being equal to said initial information **[store said authentication information in said memory]**; and

a media readable by said processing unit for storing said instructions.

15. (Amended) The meter electronics of claim 12 wherein said instructions for directing said processing unit in said host system includes:

instructions for **storing a record of said authentication information in said memory** **[directing said processing unit in said host system to:**

compare said authentication information with initial information, and

signal an error in response to said authentication information not being equal to said initial information].

16. (Amended) The meter electronics if claim **12** **[15]** wherein said instructions for directing said processing unit in said host system includes;

instructions for directing said processing unit in said host system to terminate operation of said system.

21. (Amended) The meter electronics of claim **15** **[12]** wherein said record includes a time stamp indicating when said authentication information is received.

22. (Amended) The meter electronics of claim **15** **[12]** wherein said record includes said authentication information received from said signal conditioner.

23. (Amended) A Coriolis flowmeter having tamper resistant meter electronics comprising:

at least one flow tube through which material flows;

a driver affixed to said at least one flow tube that vibrates said at least one flow tube as said material flows through said at least one flow tube;

sensors affixed to at least two different points of said at least one flow tube to generate sensor signals indicating vibrations of said at least one flow tube at said at least two different points;

a signal conditioner that transmits a drive signal to said driver, receives said sensors signals, and generates parameter signals from said sensors signals wherein said parameter signals indicate a property of said material;

a host system that provides power to said signal conditioner and receives said parameter signals from said signal conditioner;

a processing unit in said host system;

a memory connected to said processing unit in said host system;

instructions for directing said processing unit in said host system to:

periodically transmit a request for authentication information to said signal conditioner,

receive said authentication information from said signal conditioner in response to said request, **[and]**

compare said authentication information with initial information, and

signal an error in response to said authentication information not being equal to said initial information **[store said authentication information in said memory]**; and

a media readable by said processing unit for storing said instructions.

26. (Amended) The Coriolis flowmeter of claim 23 wherein said instruction for directing said processing unit in said host system includes: instructions for **storing a record of said authentication information in said memory** **[directing said processing unit in said host system to:**

compare said authentication information with initial information, and

signal an error in response to said authentication information not being equal to said initial information] .

27. (Amended) The Coriolis flowmeter of claim **23[26]** wherein said instructions for directing said processing unit in said host system includes:

instructions for directing said processing unit in said host system to terminate operation of said Coriolis flowmeter in response to said signal.

28. (Amended) The Coriolis flowmeter of claim **23** **[26]** wherein said instructions for directing said host system include:

instructions for directing said processing unit to obtain said initial information.

32. (Amended) The Coriolis flowmeter of claim **26** **[23]** wherein said record includes a time stamp indicating when said authentication information is received.

33. (Amended) The Coriolis flowmeter of claim **26** **[23]** wherein said record includes said authentication information received from said signal conditioner.

34. (Amended) A method for preventing tampering with signal conditioning circuitry in a system comprising the steps of:

periodically transmitting a request for authentication information from a host system to said signal conditioner;

receiving said authentication information from said signal conditioning circuitry in response to said request; **[and]**

comparing said authentication information with initial information; and

signal an error in response to said authentication information not being equal to said initial information **[storing said authentication information in a memory in said host system]**.

37. (Amended) The method of claim 34 further comprising the steps of:

storing said authentication information in a memory in said host system **[comparing said authentication information with initial information stored in said host system; and**

signaling an error in response to said authentication information not being equal to said initial information].

38. (Amended) The method of claim **34** **[37]** further comprising the steps of:

terminating operation of said system in response to said signal error.

42. (Amended) The method of claim **37** **[34]** wherein said record includes a time stamp indicating when said authentication information is received.

Please add claim 44 as follows:

44. The Coriolis flowmeter of claim 37 wherein said record includes said authentication information received from said signal conditioner.